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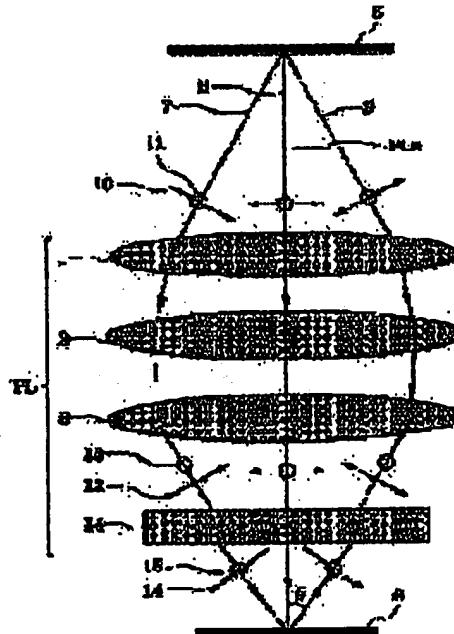
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## (54) PROJECTION OPTICAL SYSTEM AND PROJECTION ALIGNER USING THE SAME

## (57) Abstract:

**PROBLEM TO BE SOLVED:** To highly precisely image-form a pattern by correcting birefringence having an optical element included in a projection optical system, **SOLUTION:** In this projection optical system, a projection optical system PL having plural lens elements 1, 2, and 3 is provided with a birefringence correcting member made of one-axial crystal having a main axis in an optical axial direction and/or materials having distortion distribution equivalent to the one-axial crystal. Thus, birefringence generated by the plural lens elements 1, 2, and 3 can be canceled by the birefringence correcting member.



## LEGAL STATUS

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